

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Ekman et al.	Examiner:	UNKNOWN
Serial No.:	TO BE ASSIGNED	Group Art Unit:	TO BE ASSIGNED
Filed:	August 10, 2001	Docket No.:	930.336USW†
Title:	HANDOVER IN A MOBILE COMMUNICATION SYSTEM		

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The undersigned hereby certifies that this Transmittal Letter and the paper or fee, as described herein, are being deposited with the United States Postal Service 'Express Mail Post Office To Addressee' service under 37 CFR 1.10 and is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

By:

Kari Arnold
Kari Arnold

PRELIMINARY AMENDMENT

Box Patent Application
Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Please enter the following preliminary amendment into the above-referenced application.

ABSTRACT

Please insert the attached abstract into the application as the last page thereof.

CLAIMS

Please amend claims 4,12,and 13 as follows. A clean copy of the amended and new claims is included below. A marked up copy of the entire claim set is included in Appendix A.

1. A cellular communications network comprising:

a plurality of gateways for controlling cells in the cellular communications network, the gateways being arranged to receive RF information from at least one mobile station in the network, at least one gatekeeper connected to said gateways by a switched packet communication path, wherein each gateway includes means for generating a handover required indication for a call in which the gateway is engaged and packet generating means for generating a packet addressed to said gatekeeper and including control information comprising a candidate list of alternative cells to which the call could possibly be transferred and wherein the gatekeeper includes packet generating means for generating a packet for sending a handover request for handing over the call to one of said alternative cells.

2. A network according to claim 1, wherein said gateways are under the common control of said at least one gatekeeper to define a network zone within which handoff is to be effected, wherein the packet generated by said gatekeeper is addressed to one of said gateways in said zone.

3. A network according to claim 1, which is an internal cellular communications network and which comprises an interface for connection to an external network which includes an external controller, wherein the packet generated by said gatekeeper is addressed to said external controller.

4. (AMENDED) A network according to claim 1 wherein data defining network specific resources is held at each gateway.

5. A network according to claim 4, wherein said data defining network specific resources defines GSM specific end system information.

6. A network according to claim 1, which comprises a plurality of gatekeepers each controlling a set of said gateways defining individual network zones, wherein a handoff request is to be effected between said zones, the packet generated by said at least one gatekeeper being addressed to at least one other gatekeeper in the network.

7. A network according to claim 6, wherein one of said gatekeepers is defined as an anchor gatekeeper through which all handoff requests are routed.

8. A method of effecting handoff of a call in which at least one mobile station is engaged in a cellular communications network comprising a plurality of cells, the method comprising:

receiving from said mobile station a handoff required indication indicating that handover is needed from a source gateway to a target gateway;

formulating at the source gateway a packet addressed to a source gatekeeper, said packet including control information comprising a candidate list identifying possible alternative gateways; and

at the source gatekeeper, determining to which of said target gateways a handoff request should be forwarded and formulating a packet for forwarding to said target gateway.

9. A method according to claim 8, wherein the target gateway is in the same network zone as the source gateway and wherein the packet generated by the source gatekeeper is addressed to said target gateway.

10. A method according to claim 8, wherein handover is to be effected to an external network having an external controller, wherein the packet generated by the gatekeeper is addressed to an interface unit for said external network.

11. A method according to claim 8, wherein handover is to be effected between two network zones, each having a respective gatekeeper and wherein the packet generated by the source gatekeeper is addressed to a target gatekeeper identified from the candidate list.

12. (AMENDED) A method according to claim 8, wherein the source gatekeeper is defined as an anchor gatekeeper, and all handover requests are routed through said anchor gate keeper.

13. (AMENDED) A method according to claim 8, wherein the candidate list comprises local area codes and cell identifiers from which possible alternative target gateways can be resolved.

14. A method according to claim 8, wherein handover is to be effected from an external network having an external controller, wherein the gatekeeper is arranged to receive a packet from an interface unit from said external network.

REMARKS

The above preliminary amendment is made to insert an abstract page into the application and to remove multiple dependencies from claims 4,12 and 13.

Applicant respectfully requests that this preliminary amendment be entered into the record prior to calculation of the filing fee and prior to examination and consideration of the above-identified application.

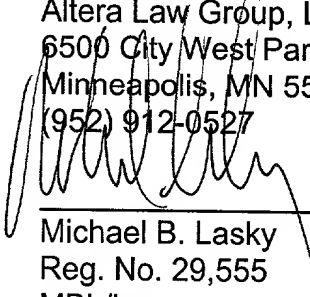
If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicant's attorney of record, Michael B. Lasky at 952-912-0527.

Respectfully submitted,

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By:



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Appendix A
Marked Up Version of Entire Claim Set

1. A cellular communications network comprising:

a plurality of gateways for controlling cells in the cellular communications network, the gateways being arranged to receive RF information from at least one mobile station in the network, at least one gatekeeper connected to said gateways by a switched packet communication path, wherein each gateway includes means for generating a handover required indication for a call in which the gateway is engaged and packet generating means for generating a packet addressed to said gatekeeper and including control information comprising a candidate list of alternative cells to which the call could possibly be transferred and wherein the gatekeeper includes packet generating means for generating a packet for sending a handover request for handing over the call to one of said alternative cells.

2. A network according to claim 1, wherein said gateways are under the common control of said at least one gatekeeper to define a network zone within which handoff is to be effected, wherein the packet generated by said gatekeeper is addressed to one of said gateways in said zone.

3. A network according to claim 1, which is an internal cellular communications network and which comprises an interface for connection to an external network which includes an external controller, wherein the packet generated by said gatekeeper is addressed to said external controller.

4. (AMENDED) A network according to [any preceding] claim 1 wherein data defining network specific resources is held at each gateway.
5. A network according to claim 4, wherein said data defining network specific resources defines GSM specific end system information.
6. A network according to claim 1, which comprises a plurality of gatekeepers each controlling a set of said gateways defining individual network zones, wherein a handoff request is to be effected between said zones, the packet generated by said at least one gatekeeper being addressed to at least one other gatekeeper in the network.
7. A network according to claim 6, wherein one of said gatekeepers is defined as an anchor gatekeeper through which all handoff requests are routed.
8. A method of effecting handoff of a call in which at least one mobile station is engaged in a cellular communications network comprising a plurality of cells, the method comprising:
- receiving from said mobile station a handoff required indication indicating that handover is needed from a source gateway to a target gateway;
 - formulating at the source gateway a packet addressed to a source gatekeeper, said packet including control information comprising a candidate list identifying possible alternative gateways; and

at the source gatekeeper, determining to which of said target gateways a handoff request should be forwarded and formulating a packet for forwarding to said target gateway.

9. A method according to claim 8, wherein the target gateway is in the same network zone as the source gateway and wherein the packet generated by the source gatekeeper is addressed to said target gateway.

10. A method according to claim 8, wherein handover is to be effected to an external network having an external controller, wherein the packet generated by the gatekeeper is addressed to an interface unit for said external network.

11. A method according to claim 8, wherein handover is to be effected between two network zones, each having a respective gatekeeper and wherein the packet generated by the source gatekeeper is addressed to a target gatekeeper identified from the candidate list.

12. (AMENDED) A method according to [any of] claim 8 [to 11], wherein the source gatekeeper is defined as an anchor gatekeeper, and all handover requests are routed through said anchor gate keeper.

13. (AMENDED) A method according to [any of] claim[s] 8 [to 12], wherein the candidate list comprises local area codes and cell identifiers from which possible alternative target gateways can be resolved.

14. A method according to claim 8, wherein handover is to be effected from an external network having an external controller, wherein the gatekeeper is arranged to receive a packet from an interface unit from said external network.

13. (AMENDED) A method according to [any of] claim[s] 8 [to 12], wherein the candidate list comprises local area codes and cell identifiers from which possible alternative target gateways can be resolved.